

WHAT IS CLAIMED IS:

1. A method for the diagnosis of an HIV-2 infection comprising the steps of:

(a) contacting DNA or RNA from a body sample suspected of containing viral genetic material with a detectable complementary DNA probe in a hybridization solution to form a mixture of nucleic acids,

(b) washing the mixture of nucleic acids with a wash solution, and

(c) detecting the formation of a hybridized complex, wherein steps (a) and (b) are performed under conditions that allow generation of a strong hybridization signal in the presence of genomic RNA of HIV-2 and a faint hybridization signal in the presence of genomic RNA of HIV-1,

wherein said detectable, complementary DNA probe is such that (a) hybridization of the DNA probe with nucleic acids of HIV-2 under hybridization conditions can be strongly detected, (b) hybridization of the DNA probe with nucleic acids of STLV-III<sub>mac</sub> under hybridization conditions can be faintly detected, and (c) hybridization of the DNA probe with nucleic acids of HIV-1 under hybridization conditions cannot be detected;

and further wherein said hybridization conditions comprise contacting DNA probe with said HIV-2, STLV-III<sub>mac</sub>, or HIV-1 in a hybridization solution consisting essentially of 5X SSC, 5x Denhart, and 50% formamide at 42°C followed by washing with a wash solution consisting essentially of 0.1X SSC and 0.1% SDS at 64°C.

2. The method of claim 1 wherein step b is performed by a process selected from the group consisting of Southern blot, Northern blot and dot blot.

3. The method of claim 1 wherein the complementary DNA comprises plasmid pSPE2 in clone CNCM No. I-595.

4. The method of claim 1 wherein a part of the probe is complementary to the U3 region of the HIV-2 genome.

5. The method of claim 1 wherein a part of the probe is complementary to the total R region of the HIV-2 genome.

6. A process for detecting the presence of HIV-2 comprising:

- (a) providing a sample suspected of containing viral genetic material;
- (b) contacting said sample with a DNA probe; and
- (c) determining whether a hybridized complex is formed, wherein said DNA probe is capable of producing a strong hybridization signal in the presence of genomic RNA of HIV-2, a weak hybridization signal in the presence of genomic RNA of SIV and faint or no hybridization signal in the presence of genomic RNA of HIV-1.

7. A method for the diagnosis of an HIV-2 infection comprising the steps of:

- (a) contacting DNA or RNA from a body sample of a person suspected of having an HIV-2 infection with a cDNA probe under conditions sufficient to form a detectable hybridized complex in the presence of an HIV-2 infection; and

(b) determining whether said hybridized complex is formed,

wherein said cDNA probe comprises a nucleotide sequence that is substantially complementary to a HIV-2 genomic RNA,

said all or part of the nucleotide sequence is capable of specifically detecting the presence of HIV-2 and

said nucleotide sequence comprises

10 20 30 40 50 60 70 80 90 100  
GTGTAAGGCGTCACTGTAAGCGAGAGGATACCATTTGTTAAGGACAGGACAGCTATCTTCTCAGGCGAGTAAGTAACTAACGAAACAGCTGAG

110 120 130 140 150 160 170 180 190 200  
ACTGCAAGGCGACTTTCAGAAAGGCGCTGTAAACCAAGGCGAGGACATGGAAGGAGCTGGTGGGGAACGCGCTCATATTCCTGTATATATACCGGCTGCTTG

210 220 230 240 250 260 270 280 290 300  
CATTGTACTTCAGTGGCTCTGCGAGAGGCTGGCAGATTGAGCGCTGAGGATCTCTCCAGCACTAGACCGATGAGCTGGGTGGGCTGCTAGACTCTCA

310 320 330 340 350 360 370 380  
CCAGCACTTGGCGGTGCTGCGAGCGCGGCGAGCTTGGCTCTTAAAGGCTTCTTAAAGCTGCACTGAGCA

8. A DNA probe capable of hybridizing under high stringency conditions to all or part of a viral RNA genome or proviral DNA genome of HIV-2 virus to form a hybridized complex, wherein said hybridized complex is capable of being detected, and wherein said high stringency conditions comprise a hybridization condition and a wash condition that allow generation of a strong hybridization

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signal in the presence of genomic RNA of HIV-2, a weak hybridization signal in the presence of genomic RNA of SIV and a faint or no hybridization signal in the presence of genomic RNA of HIV-1.

9. A DNA probe as claimed in claim 8, wherein said portion of the genome of the HIV-2 virus comprises the total R region of the HIV-2 genome.

10. A DNA probe as claimed in claim 8, wherein said portion of the genome of the HIV-2 virus comprises the U3 region of the HIV-2 genome.

11. A DNA probe as claimed in claim 8, wherein the cDNA probe comprises a sequence derived from pSPE2.

12. The DNA probe of claim 8, wherein the DNA probe comprises all or part of a viral DNA having the identifying characteristics of viral DNA deposited under culture collection accession number C.N.C.M. No. I-626.

13. The DNA probe of claim 8, wherein the DNA probe comprises all or part of a viral DNA having the identifying characteristics of viral DNA deposited under culture collection accession number C.N.C.M. No. I-627.

14. The DNA probe of claim 8, wherein the DNA probe comprises all or part of a viral DNA having the identifying characteristics of viral DNA deposited under culture collection accession number C.N.C.M. No. I-628.

15. A DNA probe as claimed in claim 8, wherein said probe is capable of hybridizing to an entire viral RNA genome or proviral DNA genome.

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